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Amended) An article of manufacture that can be exposed to a hot gas and including a metallic base body having a ceramic barrier coating bonded thereto, which has a spinel of the structural formula AB₂X₄, where

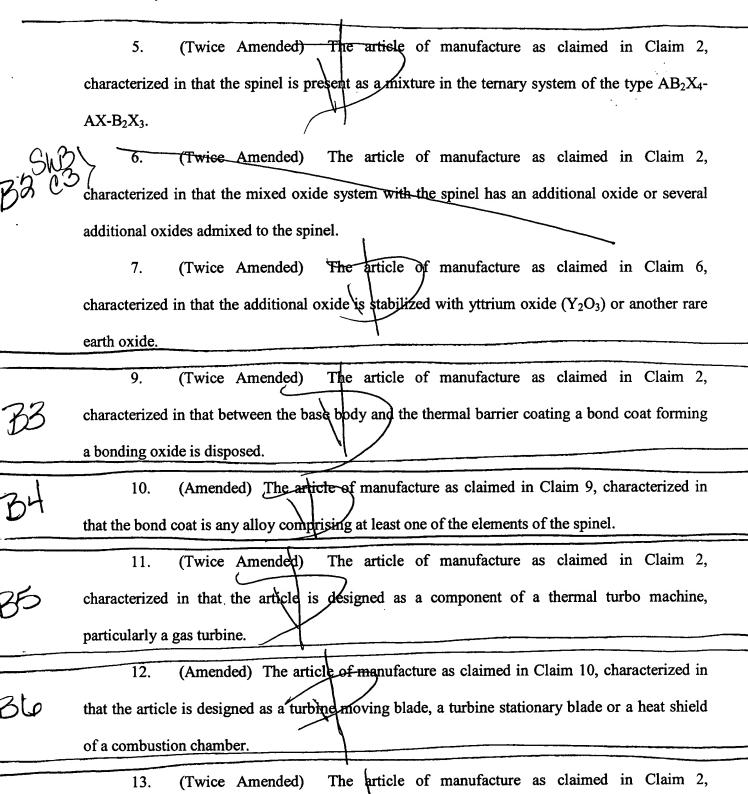
- X represents an element or several elements of the group comprising aluminum, sulfur, selenium, and tellurium,
 - A represents an element or several elements of the group comprising aluminum, manganese, iron, cobalt, nickel, copper, zinc, cadmium, silicon, titanium and tungsten, and
 - B represents an element or several elements of the group comprising aluminum, magnesium, manganese, iron, vanadium, chromium, gallium, silicon, titanium sodium, and potassium

excluding the spinels of the structural formula $Fe \circ r_2 \circ O_4$, $Fe Al_2 \circ O_4$, $Fe Fe_2 \circ O_4$, $Ni Al_2 \circ O_4$ and $Ni \circ Cr_2 \circ O_4$.

- 2. (Amended) The article of manufacture as claimed in Claim 1, characterized in that B represents aluminum (aluminate spinel) or chromium (chromium spinel), A represents nickel, cobalt or titanium, and X represents oxygen.
- 3. (Amended) The article of manufacture as claimed in Claim 1, characterized in that B magnesium, A titanium, and X oxygen.

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4. (Amended) An article of manufacture that can be exposed to a hot gas, and having a metallic base body with a ceramic barrier coating bonded thereto which has a spinel according to the structural formula AB₂X₄ characterized in that B represents aluminum (aluminate spinel) or chromium (chromium spinel), A represents magnesium, and X represents oxygen.



characterized in that the thermal expansion qoefficient α of the spinel is between 6*10⁻⁶/K and

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17*10⁻⁶/K.

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- 14. (Twice Amended) The article of manufacture as claimed in Claim 2, characterized in that the thermal conductivity of the spinel is between 1.0 W/mK and 4.0 W/mK.
- 15. (Twice Amended) The article of manufacture as claimed in Claim 2, wherein the metallic base body has a superalloy comprising nickel, cobalt and/or chromium.

16. (Amended) A method of manufacturing a thermal barrier coating on a gas turbine component with a metallic base-body, wherein a pre-reacted spinel of the structural formula AB₂X₄ excluding the spinels of the structural formula FeCr₂O₄, FeAl₂O₄, FeFe₂O₄, NiAl₂O₄ and NiCr₂O₄ is applied by means of plasma spraying or vapor deposition.

17. (Amended) The article of manufacture as claimed in Claim 1, characterized in that the spinel is present as a mixture in the ternary system of the type AB₂X₄-AX-B₂X₃.

18. (Amended) The article of manufacture as claimed in Claim 1, characterized in that the mixed oxide system with the spinel has an additional oxide or several additional oxides admixed to the spinel.

- 19. (Amended) The article of manufacture as claimed in Claim 1, characterized in that between basic body and thermal barrier coating a bond coat forming a bonding oxide is disposed.
- 20. (Amended) The article of manufacture/as claimed in Claim 2, characterized in that the thermal expansion coefficient α of the spinel is between $6*10^{-6}$ /K and $17*10^{-6}$ /K.
- 21. (Amended) The article of manufacture as claimed in Claim 2, characterized in that the thermal conductivity of the spinel is between 1.0 W/mK and 4.0 W/mK.
- 22. (Amended) The article of manufacture as claimed in Claim 2, wherein the metallic base body has a superalloy comprising nickel, cobalt and/or chromium.

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